

# Oil Field Environmental Incident Summary

**Incident:** 20161026153649      **Date/Time of Notice:** 10/26/2016 15:36

**Responsible Party:** MADISON DISPOSAL 2-1, L.L.C.

**Well Operator:** APOLLO RESOURCES LLC

**Well Name:** Madison Treating Plant #1

**Field Name:** LITTLE TANK

**Well File #:**

**Date Incident:** 10/25/2016      **Time Incident:** 01:00

**Facility ID Number:** 700103-01

**County:** MCKENZIE

**Twp:** 148

**Rng:** 102

**Sec:** 2

**Qtr:** SE NW

**Location Description:** Down the hill from Our Facility into landowner Milt Madison's Pasture.

**Submitted By:** Norman Fred

**Received By:**

**Contact Person:** Jeff Reddoch  
P O BOX 370  
MAURICE, LA 70555

**General Land Use:** Pasture

**Affected Medium:** Topsoil

**Distance Nearest Occupied Building:**

**Distance Nearest Water Well:**

**Type of Incident:** Other

**Release Contained in Dike:** No

**Reported to NRC:** No

	Spilled	Units	Recovered	Units	Followup	Units
Oil						
Brine						
Other	80	Barrels				

**Description of Other Released Contaminant:**

Fresh Water Mud. Dirty Fresh Water.

**Inspected:**

**Written Report Received:**

**Clean Up Concluded:**

**Risk Evaluation:**

Contain & Scrape Up, Do Additional Testing

**Areal Extent:**

Land owner's field. N 100'-500' Area

**Potential Environmental Impacts:**

Possibly soil. Send sample to be tested

**Action Taken or Planned:**

Monitor tanks & hoses closely. Have an emergency tank available.

**Wastes Disposal Location:** Bern will be in place to stop any further impact. 3rd party consultant will determine. In Madison 2-1 Disposal Well.

**Agencies Involved:****Updates**

**Date:** 10/25/2016 **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:****Updated Salt Water Volume:****Updated Other Volume:****Updated Other Contaminant****Notes:**

Arrived on location at 13:00. 52 degrees F, hazy, southeast wind 10-20 mph. Met with NDIC representatives, landowner's leaser and Apollo Resources manager. Walked the impacted pasture area and conducted electrical conductivity (EC) field test with Oakton soil meter. Yellow and grey grass areas showed EC values in the range of 18 to 22 millisiemens per centimeter (mS/cm). Background values showed ranges of 1000 microsiemens per centimeter (us/cm) to 2500 us/cm. Collected two water samples from standing water along release drainage areas.

WS-1 (47.67243, -103.63758) at 15:45. Field measurements of the sample showed EC values to be 189,000 us/cm, and chloride strips showed >1,077 ppm.

WS-2 (47.67415, -103.63792) at 16:45. The water in this location did not appear to have been impacted from the release. Field measurements showed EC to be 1980 us/cm and chlorides to be 55 ppm.

WS-3 (stormwater contained on the well pad northeast of the release) at 17:20. Field measurements showed EC to be 3180 us/cm and chlorides to be 85 ppm.

Further follow-up needed.

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**Date:** 10/25/2016 **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 16:45, Monday 10/24/16. (Database does not allow date of update to be earlier than the date responsible party claims incident occurred.)

50 degrees F, mostly cloudy, southeast wind 10-20 mph.

Met with the facility manager and walked the location. Photos taken and added to incident folder.

Release appeared to have occurred inside the building and traveled off the well pad along the southeast portion of the pad, downgradient to the east approximately 1000 feet in a braided pattern.

The facility manager claimed that the release was fresh water and drill cuttings. Observations of the release showed that vegetation had turned grey and was not consistent with other areas not impacted by the release. Further follow-up needed.

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**Date:** 10/26/2016 **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 11:45. 54 degrees and sunny. Met with the company president and discussed the cleanup of the site. According to Apollo, equipment for the cleanup was in transit and the plan was to build a containment dike at the furthest extent of the release.

Collected a third water sample from standing water furthest from the release point.

WS-3 (47.67367, -103.63767). Field measurements of the water showed electrical conductivity (EC) at 147,600 microsiemens per centimeter (us/cm) and chlorides at >1,077 parts per million (ppm).

Collected one soil sample (0 to 6 inches depth) from an area furthest from the release point (47.67365, -103.63765) at 14:40.

Collected a second soil sample (0 to 2 inch depth) from an area nearest the release, off the well pad (47.67128, -103.64219) at 16:15.

Took photos and added them to the incident folder. More follow-up needed.

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**Date:** 10/26/2016 **Status:** Reviewed - Follow-up Required

**Author:** Martin, Russell

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Release, due to unspecified cause, was not contained on location according to the report. Follow-up is necessary.

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**Date:** 10/27/2016 **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 11:30. 56 degrees F, hazy, south wind 10-20 mph. Met with responsible party president and NDIC representatives. Met at the furthest extent of the release to discuss the extent of the release and how cleanup was to progress. Discussed removing standing water with vac truck, excavating impacted soils, stockpiling soils until characterization for landfilling, and emergency diking in case of a precipitation event. Company representative commented that equipment was to be on site that day at 3:00 p.m. Inspected two frac tanks on the well pad location that showed leaking piping and a containment structure eroded from one of the tanks being overfilled with drilling mud, displacing the water in the tank and flowing northeast off the well pad and onto pastureland east of the pad. Photos were taken and added to the incident folder. More follow-up needed.

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**Date:** 10/28/2016 **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 10:00. 48 degrees F, partly cloudy, northwest wind at 10-20 mph. Met with the landowner, NDIC representatives, Hunt Oil representative and responsible party. At the time of inspection, the company had set a frac tank near the containment structure being constructed at the further point of release for water removal in case of precipitation. Walked the impacted area and took more photos. More follow-up needed.

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**Date:** 10/29/2016 **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 9:30. 37 degrees F, cloudy, west wind 0-5 mph. Observed the site and took photos. Two pieces of equipment had arrived at the location prior to my inspection: a tracked bulldozer and front end bucket farm tractor for the cleanup. At the time of my inspection, the bulldozer was stripping topsoil from the furthest extent area to build a containment dike at the end of the visible impacts. Spoke with the Apollo representative who stated that work would continue through the weekend. More follow-up needed.

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**Date:** 10/29/2016 **Status:** Correspondence

**Author:** Martin, Russell

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Received cleanup plan from responsible party.

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**Date:** 10/31/2016 **Status:** Inspection

**Author:** Martin, Russell

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

10/30/2016 at 15:25, on location. Met with site personnel and discussed current operations and future cleanup. Cause of spill still being determined, but it is believed a hose pumping drill cutting mud and fluids into on-site frac tanks became disconnected, pumping the slurry onto and off of the facility grounds. The entire flowpath, both on and off the facility grounds, is currently being excavated. It appears the thick mud only flowed about 1/3 of the entire flowpath, with the fluids traveling the rest of the way. A plastic-lined containment berm has been constructed on site for the recovered muds, while excavated clay-rich soil impacted by the fluids is being stockpiled next to the excavations. An earthen berm has been constructed at the end of the flowpath to keep any liquids from traveling further. Excavation depth varies from approximately 1/2 foot to 1 foot. Samples have been taken, and results should be known on 11/2 to better determine depth of penetration by the incident. A disposal destination is also being determined; awaiting sample results to determine exact contamination in the soil and muds. It appears some runoff from the facility, as well as from the adjacent wellpad, has occurred in the past. This appears to have mostly caused erosional impact as the flowpaths are full of sediment and lacking any type of vegetation.

Future plans are dependent on the sample results, but more excavation is expected as well as application of some type of amendment to the soil.

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**Date:** 11/4/2016    **Status:** Inspection

**Author:** Martin, Russell

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

11/2/2016, on location. Checked excavations with electrical conductivity probe. Background to the south of the facility within the pasture grasses showed ~670 microsiemens (uS) within top 3 inches of ground. Within excavation where release appears to have left the facility pad, readings go from ~8100 uS within the top 3 inches, dropping about 1000 uS for every subsequent 3 inch increments, with ~5000 where probe was unable to be advanced at the 12- inch depth. Along the path of the spill, readings ranged from 10,000-12,000 uS closer to the start of the release to 15,000-18,000 uS further down, with readings dropping off deeper into the soil. At the end of the spill path, some hotspots with 13,000 uS readings were found, but no readings above background were found beyond the berm constructed at the very end. Green grass visible between the berm and the nearest waterbody does not appear to have been impacted by surface flow. More excavation required, and more follow-up is required as reclamation progresses.

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**Date:** 11/8/2016    **Status:** Inspection

**Author:** Souder, Taylor

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 1500. The area of release has been scraped a total of 4 inches. I tested some random spots with the electrical conductivity meter and found very high conductivity throughout scraped area. A water sample was taken from the culvert of the drainage (downstream) and sent to the lab. A chloride strip was also used and came back as a non-detect. Apollo Resources has hired Hetti Environmental which will be out to assess the situation Friday of this week. NDIC was also on location when I visited and were taking soil samples. Further follow-up is needed.

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**Date:** 11/22/2016 **Status:** Inspection

**Author:** Washek, Sandi

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 8:15 a.m. Weather was overcast with wind out of the NE at 5 mph. Temperature was 39 degrees F. The area of impact had been scraped to a depth ranging from 6 inches to 4 feet. It appeared the release started at the pad and ran about 350-400 feet before it stopped approximately 50 feet short of where the dry stream channel enters the main channel of Charbonneau Creek. The area in the pasture has been fenced off and enclosed to prevent cattle from entering the area. Inside the fenced area there is a tank on site where water could be pumped if moisture arrives. The stream area has a soil dam in place in the impacted dry channel and a line of straw bales to hold any eroded soil and water out of the main channel. Testing of some random spots with the electrical conductivity meter found elevated conductivity throughout scraped area. There are also some areas of visibly impacted soil that have not been scraped up. Conductivity readings ran from 329 microsiemens (uS) background outside the impacted area (GPS N47.673154 W103.637609) to 23.7 millisiemens (mS) in the impacted area of the stream where dirt had already been removed at 4" deep and in the same spot to 17.56 mS at 8" deep. (GPS N47.672734 W103.637675).

Additional work needs to be conducted to identify the horizontal and vertical extent of the impacted soil of the area.

A water sample was collected from the stock dam north of the drainage (downstream) and sent to the lab. A chloride strip was also used and came back at 46 parts per million (ppm).

Stock dam GPS is N47.678369 W103.638603. Water sample number ID 20161026153649-001 & 001D. Will run Group 190 analysis on the water samples.

Also talked to the landowner of the property that was impacted and brought her up to date on who to contact and what I was doing on the site.

Additional follow-up needed for site.

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**Date:** 12/16/2016 **Status:** Inspection

**Author:** Nieraeth, Shawna

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

12/15/2016, 1040, partly cloudy, -6 degrees F and <5 mph wind. Entered area through the Hunt Oil pad in the back. There are excavated soil piles all the way down to a Conex trailer. Obvious signs of work done but nothing cleaned up. Photos in file. It also looks like there may have been an additional spill on the Hunt oil pad that may have gone off site. There were some blue flags leading from the pad to the main excavation area buried in the snow, as well as two piles of excavated soil on the pad (see drawing). A quick probe with the conductivity meter (before it stopped working due to the cold) indicated an approximate reading of 45 millisiemens per centimeter (mS/cm) in the back behind the flare pit.